

[Return to Materials Evaluations](#)

### **Aquasil Ultra Impression Material (Dentsply/Caulk) (Project 06-05) (8/07)**

Aquasil Ultra is the newest form of polyvinylsiloxane impression material marketed by Dentsply/Caulk. Aquasil Ultra features the digit Targeted Delivery System that is designed to precisely dispense the lower-viscosity materials intraorally from an autoclavable, palm-sized syringe device using unit-dose cartridges. The digit delivery system reportedly makes it easier to dispense and deliver impression material intraorally without the bulkiness of traditional automix dispensers. The pleasant-tasting impression material purportedly has hydrophilic properties, high tear strength, excellent dimensional accuracy and resistance to deformation. Aquasil Ultra is available in two setting times (fast and regular) and six viscosities: putty, rigid, heavy body, monophase, low viscosity (LV), and extra low viscosity (XLV).



#### **Manufacturer:**

DENTSPLY Caulk  
38 West Clarke Avenue  
Milford DE 19963  
(800) 532-2855  
(302) 422-4511  
(800) 788-4110 FAX  
[www.dentsply.com](http://www.dentsply.com)

#### **Suggested Retail Price:**

\$130.70	<p>Aquasil Ultra Heavy/LV/XLV Introductory Kit (#678764) contains:</p> <ul style="list-style-type: none"> <li>- Two 50mL cartridges Aquasil Ultra Heavy</li> <li>- One 50mL cartridge Aquasil Ultra LV</li> <li>- One 50mL cartridge Aquasil Ultra XLV</li> <li>- One cartridge dispenser</li> <li>- Twelve mixing tips</li> <li>- Six intraoral tips</li> <li>- One bottle Caulk Tray Adhesive</li> <li>- Instructions</li> </ul>
\$130.70	<p>Aquasil Ultra Heavy/LV/XLV Fast Set Introductory Kit (#678766) (item number and contents listed above)</p>
\$96.65	<p>Aquasil Ultra 4-Pack Refill Cartridges contains:</p> <ul style="list-style-type: none"> <li>- Four 50mL cartridges</li> <li>- Twelve Mixing Tips</li> </ul> <p>678773 Monophase 678774 Monophase Fast Set 678775 Heavy 678776 Heavy Fast Set 678777 Rigid 678778 Rigid Fast Set 678771 LV 678772 LV Fast Set</p>

	678768 XLV 678769 XLV Fast Set
\$773.35	Aquasil Ultra Bulk Refill Cartridges contains: - Thirty-two 50mL cartridges - Ninety-six mixing tips 678773-8 Monophase 678774-8 Monophase Fast Set 678775-8 Heavy 678776-8 Heavy Fast Set 678777-8 Rigid 678778-8 Rigid Fast Set 678771-8 LV 678772-8 LV Fast Set 678768-8 XLV 678769-8 XLV Fast Set
\$141.10	Aquasil Ultra in digit Targeted Delivery System (Small Unit Dose) contains: - Fifty Small Unit Dose cartridges - Fifty Mixing Tips - Fifty Intra Oral Tips 678040 LV Regular Set 678042 LV Fast Set 678043 XLV Regular Set 678045 XLV Fast Set
\$159.35	Aquasil Ultra in digit Targeted Delivery System (Large Unit Dose) contains: - Fifty Large Unit Dose cartridges - Fifty Mixing Tips - Fifty Intra Oral Tips 678041 LV Regular Set 678044 XLV Regular Set

**Government Price:**

(item number and contents listed above)

\$85.16	Aquasil Ultra Heavy/LV/XLV Introductory Kit
\$85.16	Aquasil Ultra Heavy/LV/XLV Fast Set Introductory Kit
\$58.14	Aquasil Ultra 4-Pack Refill Cartridges
\$465.15	Aquasil Ultra Bulk Refill Cartridges
\$84.86	Aquasil Ultra in digit Targeted Delivery System (Small Unit Dose)
\$95.84	Aquasil Ultra in digit Targeted Delivery System (Large Unit Dose)

**ADVANTAGES:**

- + Meets ANSI/ADA specifications for detail reproduction
- + Heavy body tray materials exceeds ISO detail reproduction specifications
- + Meets ISO specifications for linear dimensional stability
- + Acceptable working and setting times
- + Acceptable contact angles suggested adequate hydrophilicity
- + Taste and odor well tolerated by patients
- + Wide variety of material viscosity
- + Viscosity of different materials adequate for intended clinical purpose

- + Easy to remove from the oral environment
- + Good packaging configuration
- + Easy to read manufacturer instructions contain adequate technical detail

**DISADVANTAGES:**

- More expensive than some comparable polyvinyl siloxane impression materials

**SUMMARY AND CONCLUSIONS:**

Aquasil Ultra is Dentsply/Caulk's latest polyvinyl siloxane elastomeric impression material that features the unit-dose, digit Targeted Delivery System for the lower-viscosity wash materials. During this evaluation, all three Aquasil Ultra wash viscosities (XLV, LV, monophasic) provided excellent detail reproduction while the heavier-bodied tray materials (Heavy, Rigid) exceeded ISO 4823 detail reproduction requirements, providing the same detail reproduction as the wash materials. Aquasil Ultra materials met international requirements for linear dimensional stability, had acceptable working and setting times, and demonstrated hydrophilicity (via contact angle measurement) that was in the same range reported for other elastomeric impression materials in the scientific literature. The clinical users liked the packaging configuration and thought that the manufacturer instructions were easy to read and contained adequate technical detail. The evaluators reported that none of their patients objected to Aquasil Ultra's taste or odor, the material was easy to remove from the oral environment and the viscosity of each material was adequate for its intended clinical purpose. The clinical users appreciated the simplicity and control afforded by the digit Targeted Delivery System and were unanimous in recommending its purchase for their clinic. Although Aquasil Ultra is more expensive than some products, it is still comparable to other impression materials currently in use in the Federal Service inventory.

**Aquasil Ultra** is rated **Outstanding** for use in US Air Force dental facilities.